ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.622(i)	)	RM ____
Post-Transition Table of Allotments,	)	
DTV Broadcast Stations	)	
(Wittenberg, Wisconsin)	)	

To: Office of the Secretary
Attn: Chief
Policy and Rules Division
Media Bureau

PETITION FOR EXPEDITED RULE MAKING

Davis Television Wausau, LLC ("Davis"), the licensee of Television Station WFXS(TV), Wittenberg, Wisconsin, by its attorneys and pursuant to Section 1.401 of the Commission's Rules, hereby respectfully requests that the Commission initiate a rule making proceeding, on an expedited basis, to amend Section 73.622(i) of the Commission's Rules, the Post-Transition DTV Table of Allotments, to substitute DTV Channel 31 as the post-transition DTV allocation for Station WFXS(TV) in lieu of DTV Channel 50, as originally allotted. This Petition for Expedited Rule Making ("Petition") is filed in response to the Commission's *Public Notice* lifting the freeze on the filing of petitions for digital channel substitutions. Commission Lifts the Freeze on the Filing of Maximization Applications and Petitions for Digital Channel Substitutions, Effective Immediately, *Public Notice* (released May 30, 2008; DA 08-1213).

WFXS(TV), a Fox Television Network affiliate, currently operates on out-of-core NTSC Channel 55. Since NTSC Channel 55 was not allotted to Wittenberg, Wisconsin until 1996 (*Wittenberg, Wisconsin,* 11 FCC Rcd 12231 (Allocations Branch 1996)), the

station was not awarded a paired digital channel for pre-transition operations. Without a paired digital channel, WFXS-DT has been unable to establish a digital presence in its television market, and has been severely disadvantaged in its effort to secure a suitable post-transition DTV channel for WFXS-DT. It is therefore critical that the Commission expedite its processing of this Petition so that WFXS-DT can successfully transition to digital television by February 17, 2009.

At the time of its DTV channel election, Davis' post-transition DTV channel options for WFXS(TV) were severely constrained by the fact that any DTV channel selected by Davis was required to protect authorized, pre-transition analog television operations and their digital pairs. This requirement precluded Davis from selecting DTV channels that would otherwise be available for use post-transition, and effectively forced Davis to elect to operate WFXS-DT on high UHF DTV Channel 50 because that channel offered WFXS-DT the best opportunity, from among the limited number of channels available at that time, for future expansion of digital service. However, Davis subsequently determined that operation on DTV Channel 50 would be inadequate for the post-transition operations of WFXS-DT.

As the Commission is aware, high UHF channels, such as DTV Channel 50, are particularly susceptible to signal attenuation resulting from expansive foliage and tree cover. In this regard, Davis notes that a substantial portion of the Wausau-Rhinelander Designated Market Area ("DMA"), WFXS-DT's assigned television market, is comprised of densely forested area. Indeed, as demonstrated on the U.S.G.S. vegetation density foliage map attached hereto as Exhibit 1, nearly the entire northern portion of the Wausau-Rhinelander DMA (outlined in red), large sections of Marathon County, the

county in which WFXS-DT's studio and transmitter site are located, and the southwest portion of adjacent Wood County, is shaded green, indicative of a densely forested area. Due to the natural features of WFXS-DT's market, and the precipitous loss of digital television service that occurs when the received signal/field strength falls below the minimum service threshold (*i.e.*, the "cliff effect,"), WFXS-DT's presently authorized DTV Channel 50 facilities will provide inferior coverage of the station's market. Davis has further concluded that maximizing WFXS-DT's facilities on DTV Channel 50 would generate minimal coverage improvements within the WFXS-DT market due to the need to protect co-channel Station WISC-DT, Madison, Wisconsin, to the south. In fact, the most substantial coverage improvements that would be achieved by maximizing WFXS-DT's DTV Channel 50 facilities would occur in the sparsely populated northern portion of the Wausau-Rhinelander DMA, and in areas located outside of the Wausau-Rhinelander DMA (to the west in Clark County, which is part of the adjoining LaCrosse-Eau Claire, Wisconsin DMA, and to the east in Menominee and Shawano Counties, which is part of the adjoining Green Bay-Appleton, Wisconsin DMA).

Because the impact of tree foliage on signal propagation decreases at lower operating frequencies, Davis sought to identify a lower channel for use by WFXS-DT for post-transition operations. Indeed, for WFXS-DT, the increased signal strength associated with operating on a lower frequency, such as DTV Channel 31, can mean the difference between a viewable and unviewable picture in certain marginal reception areas, particularly where indoor antennas are employed and additional building penetration losses are encountered. However, under the express terms of the *Seventh Further Notice of Proposed Rule Making* ("*Seventh Further Notice*") in MB Docket No.

87-268, 21 FCC Rcd 12100 (2006), to adopt the final Post-Transition DTV Table of Allotments, the Commission made clear that it would accept requests for alternative DTV channel assignments only under four specified circumstances,[1] none of which applied to WFXS-DT.

Licensees such as Davis, which were technically able to construct their authorized DTV facilities on their existing channel, were prohibited from seeking alternative channel assignments at that time, and instead were directed to wait until the filing freeze had been lifted to file a petition for rule making for that relief. *Id.* It was not until well after the deadline for filing petitions for reconsideration of the Commission's decision in the *Seventh Report and Order* had passed that Davis became aware, through informal advice from Commission staff, that requests for alternative channel assignments for reasons other than those outlined in *Seventh Further Notice* might nevertheless be considered. As a consequence, Davis promptly filed on December 20, 2007 a Petition for Leave and Reconsideration seeking the substitution of DTV Channel 31 for DTV Channel 50 for WFXS-DT. The Commission ultimately denied Davis' request, finding that potentially affected parties did not have an opportunity to comment on the proposed alternative

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[1] Specifically, the Commission stated: "At this stage in the DTV channel election process, we will consider requests for alternative channel assignments only from (1) licensees unable to construct full, authorized DTV facilities on the [tentative channel designation ("TCD")] that they requested and received because, in order to avoid causing impermissible interference to other TCDs and still obtain their preferred channel, they had to agree to construct facilities on their TCD that are smaller than those to which they had certified on FCC Form 381, (2) licensees with international coordination issues which the Commission has been unable to resolve with the Canadian and Mexican governments, (3) licensees with TCDs for low-VHF channels (channels 2-6); and (4) new licensees and permittees that attained such status after the start of the channel election process and to which we assigned a TCD for post-transition DTV operations because their assigned NTSC or DTV channel was determined to cause impermissible interference to existing licensees." *Seventh Further Notice*, 21 FCC Rcd at 12109.

channel assignment. *Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order,* MB Docket No. 07-268 (released March 6, 2008) at ¶ 86.

As the foregoing makes clear, Davis' status as an analog-only singleton has severely disadvantaged WFXS-DT's ability to secure an acceptable post-transition DTV Channel. Davis' sole channel election opportunity, the second round of the Commission's channel election process in October 2005, was entirely inadequate for WFXS-DT because Davis could only choose from among those few channels that would not interfere with any authorized analog television service. The inadequacies of WFXS-DT's present DTV allotment are readily apparent when compared to the allotments afforded to WFXS-DT's in-market competitors, each of which will operate on either high VHF channels or substantially lower UHF channels than WFXS-DT. As a consequence of their superior DTV channel allotments, each of WFXS-DT's competitors will provide service to substantially larger populations and coverage areas than WFXS-DT.

Station	Appendix B Allotment	Network Affiliation	Population (2000 Census)	Area (km^2)
WFXS-DT	Ch. 50, 160 kW, 327m HAAT	Fox	378,000	18,272
WSAW-DT	Ch. 7, 16.9 kW, 369m HAAT	CBS	527,000	31,405
WAOW-DT	Ch. 9, 17 kW, 369 m HAAT	ABC	526,000	31,158
WHRM-DT	Ch. 24, 172 kW, 387m HAAT	Wisconsin Public Television	482,000	26,595

This disparity in coverage will make it very difficult for WFXS-DT operating on DTV Channel 50 to compete effectively in its television market. This competitive disadvantage can be eliminated if WFXS-DT were authorized to operate on DTV

Channel 31. As noted in the Engineering Statement prepared by Bernard R. Segal, P.E. (the "Engineering Statement") attached hereto as Exhibit 2, WFXS-DT's proposed operations on the DTV Channel 31 would enable the station to provide service to approximately 502,000 persons (an increase of approximately 124,000 persons) within a service area of approximately 27,682 square kilometers (an increase of approximately 9,410 square kilometers).

Expedited action on this Petition, including the release of a notice of proposed rule making for public comment as soon as possible after June 20, 2008, is critical to a successful digital transition for WFXS-DT. Due to severe winter weather conditions in the Wittenberg, Wisconsin area, the WFXS-DT antenna must be mounted on the proposed WFXS-DT tower by late November 2008. Given the approximately four month lead time to obtain that antenna from the manufacturer, *Davis must obtain a grant of the modification of its construction permit authorizing operation of WFXS-DT on DTV Channel 31 by no later than late-July 2008*. If Davis is not able to obtain authority to operate WFXS-DT on DTV Channel 31 by that date, and instead is forced to finance the construction of WFXS-DT on its presently assigned DTV Channel 50, Davis does not have the financial ability to build-out WFXS-DT a second time on an alternative, lower channel in the future. Such an outcome would permanently impair the ability of WFXS-DT to compete, and perhaps ultimately survive, in its television market and would disenfranchise a substantial portion of the station's viewers from the station's Fox Network programming.

As shown in the Engineering Statement, DTV Channel 31 may be allotted for post-transition DTV use by WFXS-DT in accordance with all applicable Commission

requirements. Specifically, operation of WFXS-DT on DTV Channel 31 will satisfy the minimum co-channel and first adjacent channel separations required under Section 73.623(d) of the Commission's Rules. Engineering Statement at 1. In addition, the proposed allotment will not cause more than 0.5% new interference to any post-transition DTV station, allotment or Class A station. *Id.* at 2. Finally, operation of WFXS-DT with the proposed facilities on DTV Channel 31 will provide the requisite 48 dBu contour coverage of Wittenberg, Wisconsin, the station's community of license. *Id.* at 3.

If the Commission allocates DTV Channel 31 to Wittenberg, Wisconsin, as requested herein, Davis will promptly file the appropriate application to modify its existing DTV construction permit for WFXS-DT to specify DTV operation on DTV Channel 31 at Wittenberg. In addition, Davis will adhere to all applicable Commission standards for the construction and initiation of operation of its post-transition DTV facility.

The benefits of an expedited grant of this request are substantial and immediate, while there are no attendant costs. The public interest would be amply served by prompt, favorable action on this Petition.

CONCLUSION

Therefore, for the reasons set forth herein, Davis respectfully requests that the Commission expeditiously institute and conduct a rule making proceeding to amend Section 73.622(i), the Post-Transition DTV Table of Allotments, as follows:

	DTV CHANNEL	
WISCONSIN	**Present**	**Proposed**
Wittenberg	50	31

Respectfully submitted,

DAVIS TELEVISION WAUSAU, LLC

By: _____
Dennis P. Corbett
John D. Poutasse

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June 12, 2008

Its Attorneys

EXHIBIT 1

U.S.G.S. Foliage Density Map


Duluth
Superior
Two Harbors
Apostle Islands
Bayfield
Ontonagon
Mt Arvon
1979
Grand
Island
Marquette
Ishpeming
Negaunee
Cloquet
DOUGLAS
BAYFIELD
MINNESOTA
Hurley
Ironwood
IRON
ASHLAND
MICHIGAN
Crystal Falls
VILAS
Eagle River
FLORENCE
Iron Mountain
Escanaba
Gladstone
Pine City
BURNETT
SAWYER
Park Falls
PRICE
ONEIDA
FOREST
Rice Lake
BARRON
RUSK
Tomahawk
LINCOLN
LANGLADE
MARINETTE
Washington
Island
Anoka
Coon Rapids
TAYLOR
Antigo
MENOM-
INEE
Marinette
Menominee
ST. CROIX
DUNN
CHIPPEWA
Chippewa Falls
MARATHON
Wausau
OCONTO
DOOR
Sturgeon
Bay
Bloomington
Lakeville
PIERCE
PEPIN
CLARK
WISCONSIN
SHAWANO
Shawano
Marshfield
Green Bay
Red Wing
Northfield
BUFFALO
WOOD
PORTAGE
Stevens Point
BROWN
Kewaunee
Faribault
JACKSON
Appleton
Owatonna
Rochester
Winona
WAUSHARA
Two Rivers
Manitowoc
ADAMS
MONROE
Oshkosh
Sheboygan
La Crosse
JUNEAU
Fond du Lac
GREEN
LAKE
FOND DU LAC
Austin
Albert Lea
Preston
VERNON
Viroqua
SAUK
Portage
COLUMBIA
DODGE
Beaver Dam
West Bend
Decorah
CRAWFORD
RICHLAND
Lake
Norton Sh
Charles City
Prairie du Chien
IOWA
Madison
Wauwatosa
Waukesha
West Allis
Milwaukee
IOWA
GRANT
Waverly
Platteville
LAFAYETTE
GREEN
Monroe
Janesville
ROCK
RACINE
Racine
Iowa Falls
Cedar Falls
Waterloo
Dubuque
KENOSHA
Kenosha
Waukegan
Freeport
Rockford
North Chicago
ILLINOIS

EXHIBIT 2

Engineering Statement

BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
KENSINGTON, MARYLAND

ENGINEERING STATEMENT
IN SUPPORT OF PETITION TO MODIFY
THE POST-TRANSITION TABLE OF DTV ALLOTMENTS
PREPARED FOR
DAVIS TELEVISION WAUSAU, LLC
STATION WFXS-DT, WITTENBERG, WISCONSIN

The instant Engineering Statement has been prepared on behalf of Davis Television Wausau, LLC, the licensee of analog Station WFXS, Wittenberg, Wisconsin. The purpose is to seek a modification of the Post-Transition Table of DTV Allotments of Section 73.622(i) of the FCC Rules by substituting Channel 31 for Channel 50 at Wittenberg, Wisconsin. The Channel 50 allotment is paired for WFXS-DT use.

As demonstrated herein, the requested post-transition use of Channel 31 would be in compliance with all FCC Rules. The first requirement is that the proposed allotment satisfy the minimum co-channel and first adjacent channel separations that are set forth in Section 73.623(d) with respect to other allotments that were set forth in Appendix B of the Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order in MB Docket No.87-268, released March 6, 2008, and earlier submitted site changes for existing stations.

The NAD '27 reference site coordinates for the proposed WFXS-DT, Channel 31, allotment are: 45° 03' 22" north latitude; 89° 27' 54" west longitude. These coordinates correspond to the site for the outstanding Channel 50 allotment. For co-channel UHF DTV stations in Zone II, the minimum separation requirement is 223.7 kilometers. The closest Channel 31 post-transition allotment is for WRPT-DT at Hibbing, Minnesota, at a distance of 372.5 kilometers from the WFXS-DT reference site.

The first adjacent channel spacing requirement is that no allotment be located within the 24-110 kilometer separation bracket from the site reference. The closest post-transition allotment on either Channel 30, or Channel 32, is for WHLA-DT, La Crosse,

Wisconsin, Channel 30, at a distance of 205.3 kilometers from the WFXS-DT site reference. The proposed Channel 31 allotment satisfies the separation requirements of Section 73.623(d).

A new allotment must not cause more than 0.5 % new interference to any post-transition DTV station, allotment, or Class A station. The facilities for the proposed allotment are for the use of a directional antenna with a maximum effective radiated power of 740 kW. The radiation pattern for the antenna is shown in Figure 1. The tabulation of relative fields for the pattern of Figure 1 is provided in Figure 2. For use on the proposed Channel 31, the pattern must be rotated 180°.

The antenna radiation center height above average terrain that is proposed is 325 meters. The antenna radiation center height above mean sea level will be 751 meters. An allocation study, using the FCC's Longley-Rice prediction methodology, and the referenced Appendix B, post-transition, database has been conducted for the proposed Channel 31 operation for Station WFXS-DT. No changes were made to the FCC's default cell size and terrain sampling interval, or to any other FCC default value.

The study was conducted using a Sunblade processor that has been found to closely replicate FCC results many times in the past. The 2000 Census was selected for the population enumerations. The allocation study showed that no co-channel, or first adjacent channel, allotment was close enough to the proposed WFXS-DT, Channel 31, allotment to warrant consideration. The study confirmed that no Class A station was close enough to merit consideration, as well. The proposed allotment satisfies the interference protection requirements of the FCC Rules.

Finally, the new allotment must provide 48 dBu encompassment of the entire principal community. Attached herewith as Figure 3 is a map that shows that the 48 dBu contour for the proposed WFXS-DT, Channel 31, allotment encompasses all of Wittenberg. The map shows, also, the noise-limited, 41 dBu, contour. Supporting data for the contour distance determination for each signal strength level at each 10° interval, as required by the Rules, are presented in Figure 4.

The antenna that will be employed is a Dielectric, Type TFU-28DSC-R 4C150. The antenna is horizontally polarized and has a 0.5° electrical beam tilt. As indicated in the tabulation of Figure 4, the depression angle to the radio horizon in each radial direction is 0.5°. Thus, the elevation pattern relative field maximum that occurs at the 0.5° beam tilt angle in each direction was used to determine the effective radiated power for the calculation of the distance to the contour of interest.

Based on the study results, the proposed Channel 31, Station WFXS-DT, operation will provide service to 502,000 persons in 27,682 square kilometers within the noise-limited, dipole adjusted, 41 dBu contour. The Appendix B allotment information table shows that the Channel 50 allotment for WFXS-DT would provide net service to 378,000 persons in 18,272 square kilometers.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 3, 2008.

Bernard R. Segal, P.E.

Bernard R. Segal, P. E.
Maryland Lic. 25811

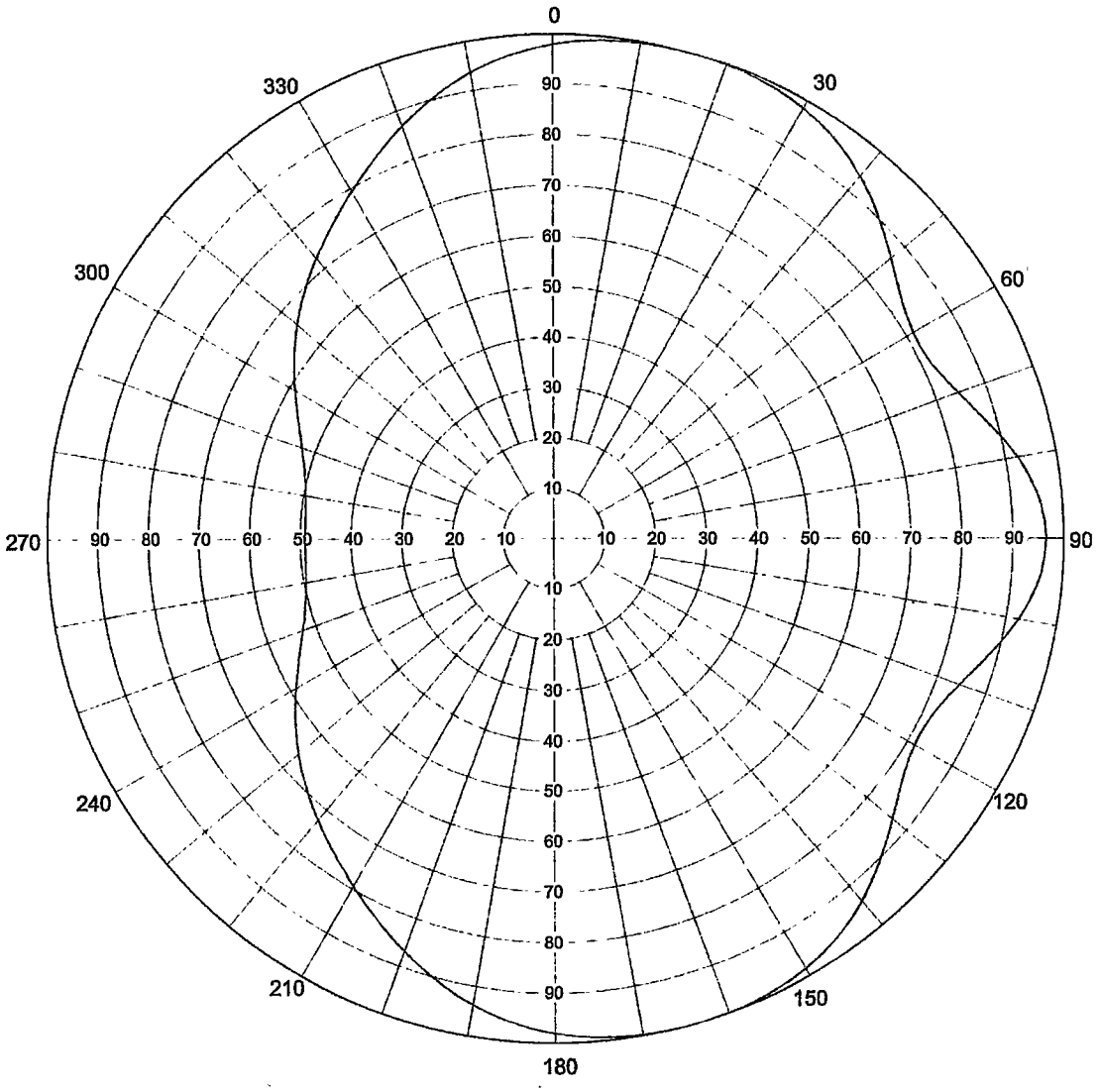
Dielectric

Proposal Number
Date 25 Apr 2008
Call Letters
Location
Customer
Antenna Type

FIGURE 1
Channel 31

AZIMUTH PATTERN

Gain	1.50 (1.76 dB)	Frequency	575 MHz
Calculated / Measured	Calculated	Drawing #	TFU-4C150



Remarks: ROTATE PATTERN 180° FOR WFXS-DT, CH. 31 OPERATION.

Dielectric

Proposal Number FIGURE 2
Date 25 Apr 2008
Call Letters Channel 31
Location
Customer
Antenna Type

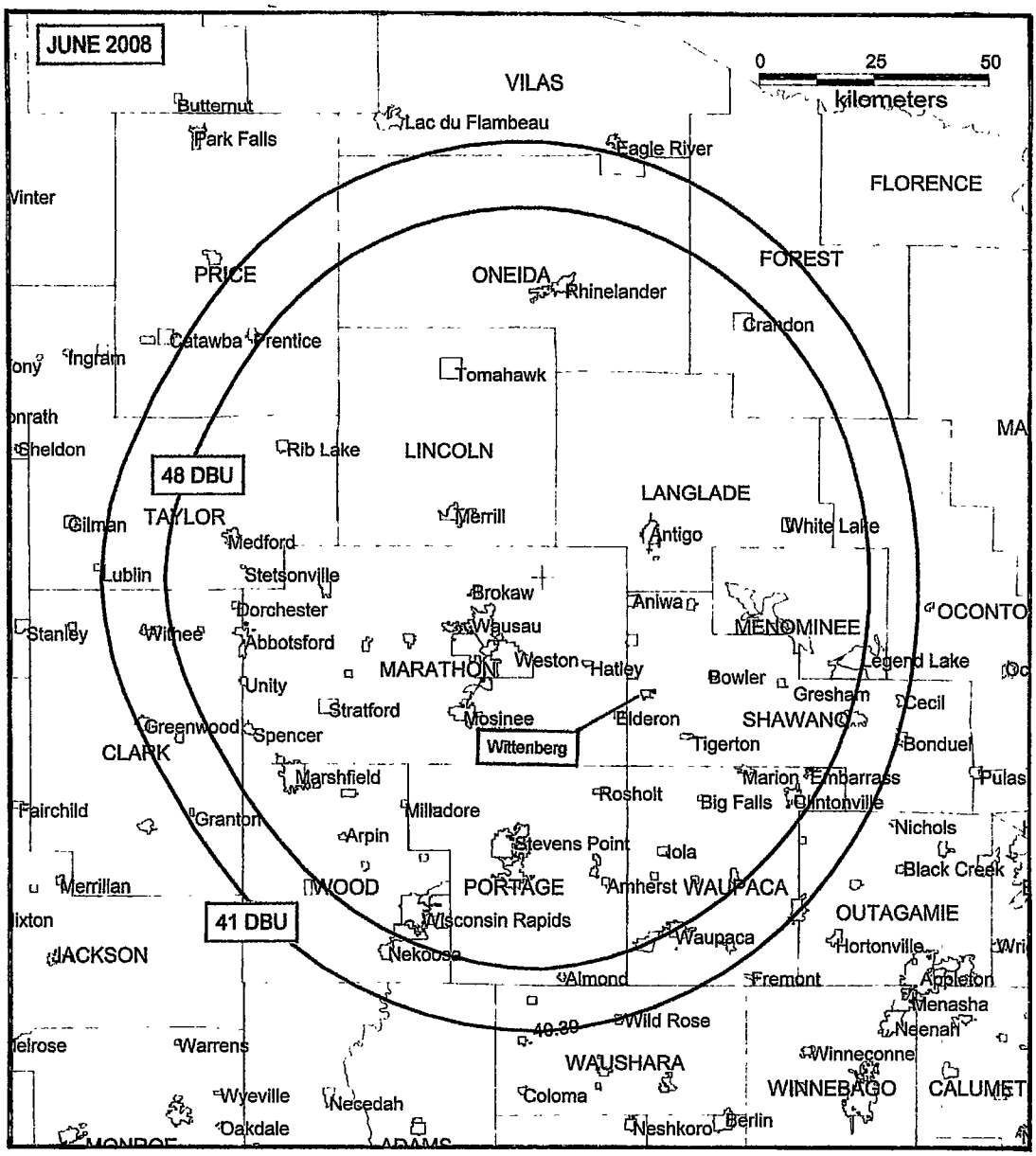
TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TFU-4C150**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.980	45	0.902	90	0.965	135	0.902	180	0.980	225	0.693	270	0.490	315	0.693
1	0.983	46	0.895	91	0.964	136	0.910	181	0.977	226	0.687	271	0.490	316	0.700
2	0.986	47	0.887	92	0.963	137	0.917	182	0.974	227	0.680	272	0.491	317	0.706
3	0.988	48	0.880	93	0.960	138	0.924	183	0.970	228	0.673	273	0.491	318	0.713
4	0.990	49	0.872	94	0.958	139	0.931	184	0.966	229	0.666	274	0.491	319	0.720
5	0.992	50	0.865	95	0.954	140	0.937	185	0.962	230	0.659	275	0.492	320	0.726
6	0.993	51	0.858	96	0.949	141	0.943	186	0.958	231	0.652	276	0.492	321	0.733
7	0.995	52	0.851	97	0.944	142	0.949	187	0.953	232	0.645	277	0.493	322	0.739
8	0.996	53	0.845	98	0.938	143	0.955	188	0.948	233	0.638	278	0.494	323	0.746
9	0.997	54	0.838	99	0.931	144	0.960	189	0.942	234	0.631	279	0.496	324	0.752
10	0.998	55	0.833	100	0.924	145	0.965	190	0.937	235	0.624	280	0.497	325	0.759
11	0.998	56	0.828	101	0.916	146	0.969	191	0.931	236	0.616	281	0.499	326	0.766
12	0.999	57	0.824	102	0.909	147	0.973	192	0.925	237	0.609	282	0.501	327	0.773
13	0.999	58	0.820	103	0.901	148	0.977	193	0.918	238	0.602	283	0.503	328	0.780
14	1.000	59	0.818	104	0.892	149	0.980	194	0.912	239	0.595	284	0.505	329	0.787
15	1.000	60	0.815	105	0.884	150	0.983	195	0.905	240	0.588	285	0.508	330	0.794
16	1.000	61	0.815	106	0.876	151	0.986	196	0.898	241	0.581	286	0.511	331	0.801
17	1.000	62	0.814	107	0.868	152	0.988	197	0.891	242	0.574	287	0.515	332	0.809
18	1.000	63	0.815	108	0.860	153	0.990	198	0.883	243	0.568	288	0.519	333	0.816
19	0.999	64	0.817	109	0.852	154	0.992	199	0.876	244	0.561	289	0.523	334	0.823
20	0.999	65	0.820	110	0.845	155	0.994	200	0.869	245	0.555	290	0.527	335	0.831
21	0.998	66	0.823	111	0.839	156	0.995	201	0.861	246	0.549	291	0.532	336	0.838
22	0.998	67	0.828	112	0.832	157	0.996	202	0.854	247	0.543	292	0.537	337	0.846
23	0.996	68	0.832	113	0.828	158	0.998	203	0.846	248	0.537	293	0.543	338	0.854
24	0.995	69	0.839	114	0.823	159	0.998	204	0.838	249	0.532	294	0.549	339	0.861
25	0.994	70	0.845	115	0.820	160	0.999	205	0.831	250	0.527	295	0.555	340	0.869
26	0.992	71	0.852	116	0.817	161	0.999	206	0.823	251	0.523	296	0.561	341	0.876
27	0.990	72	0.860	117	0.815	162	1.000	207	0.816	252	0.519	297	0.568	342	0.883
28	0.988	73	0.868	118	0.814	163	1.000	208	0.809	253	0.515	298	0.574	343	0.891
29	0.986	74	0.876	119	0.815	164	1.000	209	0.801	254	0.511	299	0.581	344	0.898
30	0.983	75	0.884	120	0.815	165	1.000	210	0.794	255	0.508	300	0.588	345	0.905
31	0.980	76	0.892	121	0.818	166	1.000	211	0.787	256	0.505	301	0.595	346	0.912
32	0.977	77	0.901	122	0.820	167	0.999	212	0.780	257	0.503	302	0.602	347	0.918
33	0.973	78	0.909	123	0.824	168	0.999	213	0.773	258	0.501	303	0.609	348	0.925
34	0.969	79	0.916	124	0.828	169	0.998	214	0.766	259	0.499	304	0.616	349	0.931
35	0.965	80	0.924	125	0.833	170	0.998	215	0.759	260	0.497	305	0.624	350	0.937
36	0.960	81	0.931	126	0.838	171	0.997	216	0.753	261	0.496	306	0.631	351	0.942
37	0.955	82	0.938	127	0.845	172	0.996	217	0.746	262	0.494	307	0.638	352	0.948
38	0.949	83	0.944	128	0.851	173	0.995	218	0.739	263	0.493	308	0.645	353	0.953
39	0.943	84	0.949	129	0.858	174	0.993	219	0.733	264	0.492	309	0.652	354	0.958
40	0.937	85	0.954	130	0.865	175	0.992	220	0.726	265	0.492	310	0.659	355	0.962
41	0.931	86	0.958	131	0.872	176	0.990	221	0.720	266	0.491	311	0.666	356	0.966
42	0.924	87	0.960	132	0.880	177	0.988	222	0.713	267	0.491	312	0.673	357	0.970
43	0.917	88	0.963	133	0.887	178	0.986	223	0.706	268	0.491	313	0.680	358	0.974
44	0.910	89	0.964	134	0.895	179	0.983	224	0.700	269	0.490	314	0.687	359	0.977

Remarks: ROTATE PATTERN 180° FOR WFXS-DT, CH. 31 OPERATION.

FIGURE 3



CALCULATED F(50,90) CONTOURS

DAVIS TELEVISION WAUSAU, LLC
STATION WFXS-DT, WITTENBERG, WISCONSIN
CHANNEL 31 740 KW (MAX-DA) 325 METERS

Bernard R. Segal, P. E. Consulting Engineer

BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
KENSINGTON, MARYLAND

FIGURE 4

ELEVATION DATA AND DISTANCES TO SERVICE CONTOURS PROPOSED WFXS-DT, WITTENBERG, WISCONSIN CH. 31 740 KW (MAX-DA) 325 METERS

NAD '27 Site Coordinates: 45° 03' 22" N; 89° 27' 54" W
Antenna Radiation Center: 751 meters AMSL

Azimuth	HAAT	Depression Angle To Radio Horizon	ERP	Distance To 48 dBu Contour	Distance To 41 dBu Contour
(Deg. True)	(meters)	(degrees)	(kW)	(km)	(km)
0	317	0.5	711	82.5	95.7
10	312	0.5	650	81.3	94.3
20	304	0.5	559	79.4	92.0
30	300	0.5	467	77.8	90.0
40	303	0.5	390	77.0	88.8
50	300	0.5	321	75.5	86.8
60	296	0.5	256	73.9	84.4
70	298	0.5	206	72.8	83.0
80	304	0.5	183	72.6	82.9
90	305	0.5	178	72.6	82.8
100	309	0.5	183	73.0	83.5
110	313	0.5	206	74.1	84.8
120	321	0.5	256	76.1	87.5
130	327	0.5	321	78.1	90.0
140	333	0.5	390	80.0	92.2
150	339	0.5	467	81.9	94.3
160	350	0.5	559	84.2	96.9
170	356	0.5	650	85.9	98.7
180	359	0.5	711	86.8	99.7
190	363	0.5	737	87.4	100.3
200	359	0.5	739	87.1	100.0
210	344	0.5	715	85.4	98.4
220	333	0.5	650	83.6	96.6
230	336	0.5	554	82.8	95.5
240	335	0.5	492	81.8	94.4
250	325	0.5	528	81.3	93.9
260	321	0.5	632	82.1	95.1
270	336	0.5	680	84.3	97.4
280	351	0.5	632	85.2	98.0
290	352	0.5	528	84.0	96.6
300	344	0.5	492	82.7	95.3
310	330	0.5	554	82.1	94.9
320	326	0.5	650	82.8	95.9
330	322	0.5	715	83.1	96.3
340	319	0.5	739	83.0	96.2
350	317	0.5	737	82.8	96.0

Note: In each direction, the relative field at the depression angle to the radio horizon coincides with the maximum in the vertical plane. Therefore, the maximum ERP was used to determine the contour distance.